PCOS Press Telebriefing
January 23, 2013
2:00 p.m. EST
Call Duration: 50 minutes

OPERATOR: Good afternoon and welcome to the press telebriefing for the NIH Evidence-based Methodology workshop on Polycystic Ovary Syndrome. At this time all lines have been placed on a listen only mode, but the floor will be open for your questions following introductory remarks. If anyone should need assistance throughout the conference you may reach a live operator by pressing star zero on your telephone key pad. At this time it is my pleasure to turn the floor over to your host, Jody Engel, Director of Communications for the NIH Office of Disease Prevention. Ms. Engel the floor is yours.

JODY ENGEL: Thank you. Good afternoon and hello everyone. Thank you very much for joining this press telebriefing to discuss the findings of the NIH Evidence-based Methodology Workshop on Polycystic Ovary Syndrome or PCOS.

The workshop was held at the National Institute of Health December 3rd through 5th, 2012 and was sponsored by the NIH Office of Disease Prevention and the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development. During the workshop over two dozen experts presented on the disorder's diagnostic criteria, developmental or genetic origins, long-term consequences, and management strategies.

Workshop discussion was facilitated by a bibliography of select citations published from January 2000 through November 2012 and structured panel and audience discussion periods. After the workshop, public comments on the panel's draft report were accepted for 30 days. The members of the workshop panel were selected in part because they have expertise in relevant fields including maternal and child health, obstetrics and gynecology, cardiology, endocrinology, diabetes, metabolism, nutrition, health communications, and health policy.

The panel members are also viewed by their peers as highly skilled in critically examining scientific evidence. Biographies of the panel members are available at prevention.nih.gov on the media resources page for the PCOS workshop. The panel members performed this task on a voluntary basis. The NIH covered their expenses for traveling to the workshop but the panel members are not compensated for their time.

It is also important to recognize that the panel issues its report as an independent group. Their final report, which is now available at prevention.nih.gov, does not represent a policy or a mission statement of the National Institutes of Health or the Federal government.

I have a few procedural points to cover before turning things over to our panel spokesperson, Dr. Robert A. Rizza. Dr. Rizza will provide a brief overview of the panel's findings, after which there will be time for questions. The telebriefing will end by 3 p.m. eastern time. Press star one on your telephone key pad to be placed in queue to ask a question. A moderator will recognize you in turn and unmute the line so you can speak. And finally only members of the media are permitted to ask questions during this telebriefing. Other interested parties are welcome to listen in but will not be able to address the panel with questions. Thank you for your time and with that I'll turn things over to our panel spokesperson, Dr. Robert A. Rizza at the Mayo Clinic in Rochester, Minnesota. Dr. Rizza…

ROBERT RIZZA: Thanks very much, Jody. I want to begin by saying it was a pleasure for all of us on the panel to participate in the workshop, review the current data, and provide recommendations on our final report. I want to read a brief statement on behalf of the panel.

The syndrome is an important public health problem that affects approximately five million reproductive age women in the United States. Women with PCOS have difficulty becoming pregnant and often have other symptoms such as irregular or no menstrual periods, acne, weight gain, excess hair growth on the body or face, thinning of the scalp hair, and ovarian cysts.

Women with PCOS also have an increased risk for type 2 diabetes, high cholesterol, and high blood pressure. The panel found that the use of multiple classification systems to diagnose PCOS (these include the *NIH Criteria*, the *Rotterdam Criteria* and the *Androgen Excess-PCOS Society Criteria*) is confusing and delays progress in understanding the disorder.

It often hinders the ability of clinicians to partner with women to address and manage the health issues that concern them. We concluded that each individual experiences PCOS in the context of her own reproductive, metabolic, and quality of life concerns. Although the syndrome is associated with metabolic dysfunctions such as diabetes, it's unclear whether these abnormalities increase the instance of diabetic complications.

The relationship between PCOS and other metabolic abnormalities such as sleep apnea, depression and anxiety, and quality of life remains to be defined by longitudinal studies and these important public health issues deserve more attention.

The panel also determined that because the underlying pathophysiology of PCOS is not fully understood, treatment is currently directed at symptoms rather than targeting a specific etiological pathway. It is not known if any treatments alter the natural history of the syndrome or whether screening and subsequent treatment of associated abnormalities reduces chronic morbidity or mortality.

Given the data provided, the panel has identified the following major areas as critical to the advancement and understanding of PCOS.

- First, we believe the name PCOS causes confusion and focuses on a criteria—namely polycystic ovarian morphology— that is neither necessary nor sufficient to diagnose the syndrome. We therefore believe it is time to assign a name that reflects the complex metabolic, hypothalamic, pituitary, ovarian, and adrenal interactions that characterize PCOS.
- Second, we recommend that clinicians and researchers use the broad, inclusionary diagnostic *Rotterdam Criteria* in the interim to identify specific phenotypes.
- We recommend the improvement of methods and criteria used to assess androgen excess, ovulatory dysfunction, and polycystic ovarian morphology.
- We believe the Australian model for involving consumers in guideline development and engaging primary care providers, multidisciplinary teams, and patients in educational programmatic roll-out is a model worthy of imitation.
- We recommend several important research and clinical priorities, including conducting appropriately powered multiethnic studies and identifying optimal therapies to treat the most common symptoms.
- We recommend the establishment of multidisciplinary programs to improve public and health care provider awareness and management of PCOS for women who currently have this syndrome.

I would like to have my other colleagues on the panel, assuming they're on the phone, to introduce themselves if you would please.

TIMOTHY JOHNSON: This is Dr. Tim Johnson; I'm also on the phone. My understanding is that one of our other colleagues is ill and the other one is in clinic. So it's Dr. Rizza and me that are representing the panel today.

RIZZA: I'm happy to answer any questions.

OPERATOR: And our first question comes from Patti Neighmond from National Public. Please state your question.

PATTI NEIGHMOND: Hi, thank you. It's Patti Neighmond and I'm from National Public Radio. I'm just wondering what has to happen for the name change. How do you actually go about changing a name? Who does that and how might that happen?

RIZZA: Patti, that's a great question. We had that conversation as part of the panel and Dr. Johnson can comment on that as well. There are a variety of people with sufficient expertise that understand the innuendo of what is being said here. The problem is PCOS is a very broad term that really lumps many, many different things. I think you need to have the different constituencies—societies and small group experts—hammer this out, basically address the difficult question of what to call this to provide common ground to go forward.

Tim I don't know if you want to comment as well?

JOHNSON: I think the panel thought that a new name would be very helpful because the current name, as Dr. Rizza said, focuses on only one of the criteria and actually doesn't include a discussion about metabolic syndrome and metabolic consequences, insulin resistance, and some of the other major issues that could be lifelong issues that the people who have this disease—or this series of diseases—might have.

Our hope was that a group or a subgroup of people who are interested in the condition could come together very, very quickly and simply pick a name that is more inclusive. I don't think this needs to be a big long process, I think it could be done relatively quickly. But for funding agencies, for example— the National Diabetes Institute, it might not resonate how important this disease is because the metabolic syndrome or metabolic condition are not included in it.

I think that there has to be some kind of inclusion of language around the metabolic condition, some recognition that these patients often have infertility, often have androgen excess; a kind of quick, catchy name that appropriately refocuses on the next step—which is much more important. The research agenda, the public policy agenda, and the engagement of consumers who are interested in the condition—this is much more important.

But all those things (research, research funding, and the engagement of interested communities— whether they are researchers or patients who have the condition) are going to be facilitated by a more inclusive definition. For example, the Androgen Excess Society (which recently renamed itself the Androgen Excess and PCOS Society) plus some of the professional organizations—the American College of Physicians, the American College of OB-GYN, and some international organizations as well. I think that the Australians gave us a really good example. They spent over a year doing a very comprehensive review and evaluation of the status of PCOS. They included lay people; they included people with the condition; they included advocacy groups as part of that process. I think there needs to be a quick process of a selected group of people who maybe self-identify, decide what they are going to call it, and then move forward with the important work that still needs to be done.

NEIGHMOND: Did the Australians come up with a name?

JOHNSON: No. Right now the groups in Australia have used the PCOS name and they didn't make any recommendations. There is the PCOS Society and they use the term PCOS in their draft documents.

RIZZA: The words PCOS, which certainly became a tradition, as everybody agrees—is neither necessary nor sufficient; this is not just having polycystic ovaries, which are very difficult to find. That's the first hurdle to get over.

NEIGHMOND: Can I ask one more thing?

RIZZA: Sure, go ahead.

NEIGHMOND: I'm just confused. Metabolic syndrome– is the assumption that individuals who have metabolic syndrome are at increased risk for this hormone imbalance …

RIZZA: No.

NEIGHMOND: Or that this hormone imbalance can put them at increased risk for metabolic syndrome.

JOHNSON: This metabolic imbalance that we're talking about has metabolic consequences and leads to conditions of metabolic disorder.

NEIGHMOND: OK.

JOHNSON: The syndrome can include androgen excess. It can include irregular periods associated with not just androgen problems but estrogen problems and progesterone problems. And patients who have this condition—as defined either by androgen excess, irregular or no periods, or polycystic ovarian morphology on ultrasound for example, if they have two of those conditions—then they're at risk for conditions like insulin resistance, for an increased risk of hypertension, for a series of significant and consequential metabolic problems that could affect them for the rest of their lives.

One of the things we really need to study is if a woman is identified with polycystic ovary syndrome because she has infertility when she's 23 years old, what does that mean when she is 45 years old and 50 years old and 60 years old in terms of her risks of developing other metabolic problems that can substantially impact her life.

RIZZA: Probably an important clarification—and you may know this—is that doctors use the words syndrome when you don't what's happening. Therefore a person, with a cluster of symptoms, may or may not have metabolic syndrome. And the etiology, for people who do and do not have metabolic syndrome, may be to totally different, but we're walking them all into this one big basket. It's such a broad and ill-defined term that it does not help us understand either the pathogenesis or the appropriate treatment.

NEIGHMOND: Thank you.

OPERATOR: Thank you and our next question comes from Brenda Goodman from WebMD. Please state your question.

BRENDA GOODMAN: Hi and thank you for taking the call. I'm just curious because the name is confusing…is that perhaps hindering diagnosis too? I think Dr. Rizzo you've done some studies on this—that the condition is very under-diagnosed.

RIZZA: Brenda—not just I, a lot of people have done these studies and suggested it is under-diagnosed, but the even more important thing, and you saw this in the report, it used be called the Stein Leventhal Syndrome by the two individuals that described it. Then in trying to get away from using names, the second term came into existence. It's used differently around the world; it is used differently in different settings and depending on the instruments you have (for example, how you image the ovaries) you'll come up with a different conclusion.

I think it was a wonderful first step that the Stein-Leventhal name was changed, but obviously it's adding confusion and therefore leads to women not being diagnosed who may have the syndrome.

GOODMAN: I just want to make sure I'm reading that right; you don't actually have to have ovarian cysts to be diagnosed with PCOS.

RIZZA: No, absolutely; see that's the problem. When going through adolescence, there are numerous changes in the ovaries and cysts which will look exactly like polycystic ovary disease. A woman at 65 has very few cysts and that's actually the conundrum here. The definition of normal was extremely broad; you don't have age-related norms. So you really don't have to have cysts to have the syndrome or you could have cysts and not have the syndrome. Tim over to you…

JOHNSON: Let me say that for women who are past their teenage years, the condition could include any one of a number of things. In fact, the syndrome may be a couple of different diseases. We're learning a lot about genetic diseases and personalized medicine. What we said is that right now doctors who use the *Rotterdam Criteria* use androgen excess (so women who have excess facial hair, excess hair on their bodies and evidence of elevated testosterone and other hormones – androgen hormones, and a history of irregular periods or no periods) and/or polycystic ovarian morphology, which used to be identified when people did surgery but now we have ultrasounds and very, very high resolution ultrasounds and we can identify microcystic ovaries. What polycystic ovarian morphology means in imaging is problematic right now.

We know that, if for example, you have androgen excess and irregular periods then that gives you the diagnosis of polycystic ovary syndrome. We know that if you have irregular periods and polycystic ovarian morphology that that gives you the syndrome.

We know that if you have all three of those conditions, your risks of having complications are even higher. It may be that in the future that we identify that the syndrome is actually several diseases. The women who are very thin and have androgen excess may have a different genetic cause for the condition than the women who develop weight gain and have irregular periods in their 20s and 30s. So the syndrome, in fact, may be a number of different genetic problems that individuals have and so rather than being reductionist we felt that we should be as open as possible to the kinds of things that can lead to long-term sequelae.

As Dr. Rizza said, it's very problematic in teenagers. If you see a 13-year-old girl who comes in complaining of excess androgen and too much hair growth and has elevated testosterone and you check her ovaries on ultrasound, you've got to be very careful in making a diagnosis of PCOS because a lot of 13-year-old girls have multi-cystic ovaries.

The diagnosis in teenagers is very problematic and one needs to be very, very careful to make sure that you don't overdiagnose the condition in teenagers. I think in adults we're pretty comfortable with what's going on.

The challenge of this condition is that patients come in through different doors. So, for example, if I have irregular periods and have a little bit of extra androgen excess, my problem may be that I want to get pregnant and have a baby. A lot of people with this syndrome come in through the door of the OB-GYN saying, "I have infertility and I want to get pregnant. I've been having unprotected intercourse." Another person may go to their dermatologist and say, "I'm not happy with all this excess hair growth." Another person may go in to their internist and say, "I'm overweight and they told me I have prediabetes." Depending on which door you go in you may go down a different pathway because obstetricians are interested in ovaries and diabetologists are interested in blood sugar control and dermatologists do something else.

What we need to do is think about patients holistically and recognize that this is a condition that can manifest in a lot of different ways. One of the things that we talked about was the importance of multidisciplinary teams and multidisciplinary management of these patients so that the whole picture is taken care of.

And that issue is even more problematic for teenagers. I think that there is probably going to be a series of adolescent androgen excess—whatever this new disease is called—clinics that are set up specifically to take care of teenagers with this disease.

We had experts from South America and all around the world and one of the biggest challenges for everybody who takes care of this condition is how to make the diagnosis appropriately and not over make the diagnosis in teenagers.

GOODMAN: Thank you.

OPERATOR: And again ladies and gentlemen if you do have a question or comment please press star one. And our next question comes from Stephanie Keller from Coffey Communication. Please state your question.

STEPHANIE KELLER: My question was just asked, I wondered about the link between the name and overdiagnosis.

RIZZA: You can be diagnosed depending on whose criteria you're using. For example, young women and adolescents may have cysts in the ovaries, which is perfectly normal. So you can end up diagnosing an individual inadvertently if she happened to be a teenager and happened to have a bit of acne and a bit of hirsutism, but this is not polycystic syndrome at all. You may inadvertently think she has PCOS. That term, and this can happen in almost any different way, depends upon the syndrome.

KELLER: May I ask a question regarding treatment? Your panel calls for more research focused on better treatments. How responsive is the syndrome to treatments now?

RIZZA: Dr. Johnson would like to do that one?

JOHNSON: It kind of depends what you're treating. If the patient comes in with infertility then we have several treatments that are available. And actually one of the treatments that is available for both irregular periods and infertility is exercise and weight loss. We know that women who lose weight—and the weight doesn't have to be substantial, it's sometimes eight to ten pounds of weight loss— who have this condition start having normal periods again and then get pregnant spontaneously.

So the first line of therapy is exercise and weight loss. If that is not successful for patients who want to get pregnant then we have things like clomiphene citrate, hyperstimulation, and artificial reproduction technologies that can induce ovulation because obviously if women are not having regular menstrual periods they are not ovulating and in order for them to get pregnant they have to ovulate.

So that's the approach. The challenges are that neither clomiphene citrate nor ovulation induction are great therapies. They have risks; they have complications. One of the common complications of both of them is multiple pregnancies, which we try to avoid. And there is a lethal condition called hyperstimulation syndrome. If you give people hormone injections to try to induce ovulation they can actually get swollen up; they can develop ascites; they can develop ovarian hyperstimulation syndrome and they can actually die from it. Attention has to be paid very carefully to how these patients are managed now and hopefully we'll have better ways to manage their fertility in the future. Robert, do you want to talk about the metabolic management?

RIZZA: Absolutely. The central thing that Tim is alluding to is that you can have a glucose tolerance test performed in a young woman and you could find that she had abnormal glucose tolerance, which we refer to as prediabetes. We presume, but we do not know, that we treat individuals with this syndrome in the same manner as we would treat someone else with prediabetes that does not have the syndrome. But we don't know if this is correct or not. There are various drugs that are used as part of NIH studies, one we

refer to as Metformin, that lower blood sugar, but we don't know whether that is going to alter the natural history or prediabetes in a woman with this particular syndrome. And we also don't know if, because of the diabetes and the long term complications that are associated with diabetes in people with this syndrome, results will be the same as those who do not have the syndrome.

So we are basically being guided by evidence from people who have not had this syndrome, which is not appropriate.

KELLER: Thank you.

OPERATOR: And again that is star one if you do have a question or comment.

ENGEL: As we wait to see if there are any additional questions from the press, I'd like to point out that there will be a playback of this telebriefing available shortly after the call. To access the telebriefing playback, just dial 888-632-8973 and the replay code is 51310423. This information is also posted on our media resources page for PCOS at prevention.nih.gov.

Again, if you would like to ask a question please press star one on your key pad.

OPERATOR: And we have another question from Stephanie Keller from Coffey Communication. Please state your question.

KELLER: You also called for additional research to identify the risks that are concurrent with this syndrome. What risks of the syndrome are not appreciated or fully understood? Thank you.

RIZZA: Stephanie, it's good that you ask these questions so we all can feel useful.

KELLER: (Laughter)

RIZZA: One of the major risks associated with the syndrome is believed to be increased cardiovascular risks. In other words, there's a greater chance of having complications such as a heart attack or stroke …

KELLER: Mm-hmm.

RIZZA: … And we think that it's probably correct, but it's not really clear—particularly the level of the risk.

KELLER: And was that Dr. Rizza or Dr. Johnson.

RIZZA: Dr. Rizza, sorry I didn't identify myself.

KELLER: Thank you.

RIZZA: And the same thing actually goes for the issue of treating diabetes or prediabetes in women who are hoping to become pregnant. It is clear that if you are about to become pregnant it is essential that your blood sugar is normal. We don't exactly know the implications of abnormal glucose tolerance tests before pregnancy in women with this syndrome.

OPERATOR: And again that is star one if you do have a question or comment. And we have another question from Stephanie Keller. Please state your question.

KELLER: I'm trying to feel useful too. It will be my last question and thank you so much. What take home messages would you most like women to take home from your report?

RIZZA: Tim, I defer to you.

JOHNSON: I think the take home message is that this condition is a major public health problem. The condition is much more widespread than people generally know. That maybe as many as 15 percent to even 20 percent of women have this condition and that the condition has real sequelae immediately in terms of pregnancy and issues in your life, but it could have substantially long-term sequelae as well.

I think the other take home message is that this is a condition that has a familial risk. If a woman has this syndrome then her daughter is at risk to have this syndrome and in fact there may be risks for men. If men have been identified with certain metabolic conditions their daughters may be at risk for these kinds of conditions a well.

I think that there are some important messages from a public health perspective. Women who have irregular periods and androgen excess and who may have abdominal pain or might be told they have cysts need to go in and say, "I want a complete evaluation. Do I have problems with prediabetes? Do I have high blood pressure?" And they need to ask their doctor, "Do you have something that will help my condition?"

The medical community needs to be aware of the fact that we know that exercise, weight loss, and good nutrition can reduce the impact of this condition. Right now in the United States with an obesity epidemic it's not just that you're overweight but that overweight can increase your risk for this condition and have real long-term consequences for you.

I have patients I can think of right now that I've taken care of when they were pregnant who had PCOS who now have a 15-year-old daughter and the mother has prediabetes or diabetes and the daughter has clear evidence of polycystic ovary syndrome. It's a lot easier to make the diagnosis of PCOS in an adolescent if you look at her mother and her mother is sitting there and obviously has the condition as well.

I think that needs to be the public message. It may well be that the prevalence of the condition is increasing given changes in the average weight of people. Women need to know that this is a condition that can affect their health short-term and long-term. They need to know that it's a condition that can affect their daughters and their granddaughters, and the medical community needs to be aware of the fact that it's a complicated condition that it can manifest in a variety of different ways, and that the message is a common message we are giving to a lot of patients these days—that you need to exercise, you need a healthy diet, and you need to lose weight and in a lot of ways you'll be healthier.

The other interesting thing we heard is that another therapy that potentially helps these patients is actually treatment for sleep apnea. A lot of these women have sleep apnea. They may snore at night, they may wake up tired, they may fall asleep during the afternoon, they may have symptoms of obstructive sleep apnea, and research has shown that if those patients are treated with CPAP—with Continuous Positive Airway Pressure—at night not only will they sleep better, but many of the manifestations of their PCOS will resolve.

One of the treatments in patients who have PCOS, and also have sleep apnea, is to treat their sleep apnea. So one of the things that people have to be screened for is sleep apnea, and that is not an easy thing to treat or screen for. It's complicated to go in for a polysomnogram, which is an in-hospital sleep test. It's expensive and we need to make that more available as well.

RIZZA: I'm going to add my voice and say I think the take home message to a woman with the disease and her family is you're not alone. If properly diagnosed and treated this can change your life for the good.

KELLER: Thank you.

OPERATOR: Our next question comes from Amy Medling from the blog PCOS Diva. Please state your question.

AMY MEDLING: Hi. I was interested in the criteria. I know that you had mentioned there are three different types of criteria: the *NIH*, the *Rotterdam*, and the *Androgen Excess Society*. I was wondering if there were going to be any efforts made to come up with an international universal criteria for diagnosis?

JOHNSON: Well, we actually made the recommendation that the *Rotterdam Criteria* be adopted. But, when people use the *Rotterdam Criteria*, rather than just saying that patients had polycystic ovary syndrome, that you say the patient has PCOS based on *Rotterdam Criteria* because ____. Now let me explain that, because in the *Rotterdam Criteria* there are actually three things: androgen excess, irregular periods or no periods, and polycystic ovarian morphology. To have the disease according to the *Rotterdam Criteria* you can actually have androgen excess and irregular periods, or androgen excess and polycystic ovarian morphology, or irregular periods and polycystic ovarian morphology, or all three of those things. So they're actually four different ways that you can end up being diagnosed with PCOS based on the *Rotterdam Criteria*. Our recommendation is that people use the *Rotterdam Criteria* because both the *Androgen Excess Society* and the *NIH Criteria* have components that are also in the *Rotterdam Criteria*. The *Rotterdam Criteria* includes *the NIH Criteria*. It includes the *Androgen Excess Criteria* and pairs them up in different kinds of ways. We just thought, given the fact that we're not even sure what this disease is yet or how many diseases it is, that it was better to be inclusive and descriptive.

So our recommendation—the panel recommendation—is that the *Rotterdam Criteria* be used as the standard criteria for the time being and that they be inclusive of and descriptive of exactly the basis for the diagnosis using the *Rotterdam Criteria*.

MEDLING: Thank you.

OPERATOR: And as a reminder that's star one to pose a question. Our next question comes from Amy Swinderman from Drug Discovery News. Please state your question.

AMY SWINDERMAN: Hi everyone; thanks very much for doing the teleconference today. I have a question regarding a statement that you made a few minutes ago regarding both the short-term and long-term consequences of having PCOS if left untreated. Can you talk a little bit about what the long-term consequences of PCOS might be for women who are either going through menopause or older?

RIZZA: One of the possibilities, this is Dr. Rizza, is if indeed the individual who has this thing we're referring to as PCOS, this syndrome, does have increased cardiovascular risk, does have abnormal blood pressure, abnormal glucose metabolism, and she does not realize that—when she's going through menopause and her estrogen levels are falling, there are a variety of other reasons by which her cardiovascular risk may be increased. So, that will be in addition to having this go on for many, many years before she reaches menopause.

You're probably well aware that for most of us our risk for cardiovascular disease happens over a long period of time and then we develop symptoms as we get older. So the risk would be that she would go untreated and have a variety of things that could have been treated for years before to put her at a lower risk once she reached menopause.

SWINDERMAN: Thank you and just as a follow up question are you aware of any drugs that are in preclinical development currently for PCOS that take a different approach to some of the traditional medications that we have on the market currently like Metformin?

RIZZA: I'm not aware of anything specifically for PCOS, but in years ahead there will likely be very specific diseases that could be targeted that will no longer be under this umbrella and depending upon the pathogenesis there are specific drugs that may be good.

JOHNSON: I think that's right. This condition or these conditions are going to be the ones that become part of what we're calling more and more personalized medicine. I see patients who are very thin who have irregular periods and who have androgen excess, and the treatment for that woman may in the future be very different than the patient who is overweight, doesn't look particularly like she has androgen excess but has polycystic ovarian morphology.

It may well be that we'll target different manifestations of the disease, different phenotypes—women who present with different manifestations of the disease—in different ways. I think that one of the things that we're more and more recognizing is that this syndrome can have long-term sequelae. More and more we're recognizing that conditions that OB-GYN doctors have seen for a long time can have lifelong implications.

Another common example is gestational diabetes. A lot of women for years have had gestational diabetes and they may need to be on a diet, they may need to be on insulin. When the pregnancy is over they get tested and they're fine. We now know that those women, even if they test normal after the pregnancy, are at increased risk lifelong for developing diabetes and maybe some other conditions as well.

Women who have preeclampsia, for example, may have a risk 20 or 30 years later of developing diabetes. What we need to do is recognize that conditions that women have in their 20s may return in a different manifestation when they're in their 40s and 50s so we need to look and screen for it.

And that's really what we're talking about now—identifying problems early that can affect women later in their lives and make them aware of it and make sure that their doctors know, are tuned into the fact, that just because you had gestational diabetes when you were 22, now that you're 50 we need to be thinking about: Are you at an increased risk for prediabetes or diabetes? Are you at an increase risk for metabolic syndrome? Are you at an increased risk for hypertension? Are you at an increased risk for non-hypertensive cardiovascular disease because you have increased inflammatory markers that increase your risk of coronary artery disease?

Those are the kind of lessons we're starting to learn. The disease that you had early in her life, and maybe even diseases that you were exposed to in utero, we're now learning that a lot of conditions are determined from the fetal status and what we're calling fetal programming.

A lot of these diseases are programmed early and we need to come up with a health care system that follows women throughout their lifespan and checks on them at appropriate times to make sure that they're not developing complications. What we need to know from a health care delivery point of view is how often and when should we be doing that testing. They don't need to be tested every year. What kind of an appropriate testing system should they have so that we can identify diseases and prevent those compilations?

There are some real policy implications and practice implications that we need to get some data about before we can make best practice recommendations. Would you agree with that Bob?

RIZZA: Oh, absolutely and if you know the specific abnormality then you can target a drug to that person that can treat and potentially prevent each problem in the long run. By understanding the cause you can develop specific therapies that would therefore be a tremendous value to a woman. That's what we need to know.

SWINDERMAN: Thank you and I just have one more question if I could ask. What is the best way in your review for a woman who has PCOS to go about choosing a good doctor who is up on the latest research and treatments that are available, as well as a multidisciplinary approach that you all are discussing?

RIZZA: Well, I think that's a very difficult question. It's the same thing whether it's a woman with PCOS, or a woman with diabetes, or with anything. What you want to do is be choosing a doctor that has a broad base, generally has the ability to access a multidisciplinary program. And one of the most important things that you want to be sure about is that your doctor is a person that you like and vice versa. Interpersonal relationships are extraordinary important. So you like him or her, it's multidisciplinary, and they have information available from the system in which they belong.

SWINDERMAN: Thank you very much.

JOHNSON: This is Tim Johnson. I would just add that we gave a nod to some really good resources as part of our recommendation. The Australians, for example, have got extensive patient information and patient education resources. One of the things that women have to do is educate themselves about this condition, be knowledgeable about this condition, and then figure out a physician or maybe even a physician team where they feel comfortable in partnering in terms of managing the condition.

This is not one of those "I've got a cold, I get a shot, I get better kind of a thing." This is a condition that has long-term implications and maybe lifelong implications. First of all you have to be knowledgeable. You need to test to make sure that the health care team that you're working with is also knowledgeable and then develop a long-term comfortable partnership with them. It needs to go both ways.

You need to be getting information and asking questions, they need to be getting information and asking questions. There has to be a level of comfort. There is a lot of information on the NIH website and patients should really take advantage of good internet connectivity and go to the really rich resources that are available about PCOS. The NIH website is great place to start.

SWINDERMAN: Thank you very much.

OPERATOR: Thank you and our next question comes from Sandye Chabot from Therapeutic Research, please state your question.

SANDYE CHABOT: I was just wondering about your thin PCOSers, in regards to diagnosis and in regards to prevention of these metabolic syndromes and things like. I was wondering if you had a comment of what their take home message should be.

RIZZA: I'm sorry I missed the first part. You said women who were thin and have this…was that the first part of your question?

CHABBOT: Yes about the thin PCOSers.

RIZZA: That's a real dilemma, isn't it? Because one of the things we understand is that if you take obese women with PCOS and they lose weight, many of these things get better. We frankly do not know whether that will extend to PCOS when it occurs in women who are thin.

If you and I stay lean and stay fit, our chances of getting diabetes and other metabolic abnormalities dramatically decrease. If you're fit and lean we do not know but suspect that it may make a difference. But that's exactly the kind of research question that needs to be asked.

OPERATOR: And again ladies and gentlemen that's star one to pose a question over the phone. We have another question from Amy Swinderman from Drug Discovery News. Please state you question.

SWINDERMAN: Hi, thanks very much. Just one more question. There's been a lot of discussion today about research coming out of Australia. Would you say that PCOS research is as prioritized here in the United States?

RIZZA: I think what we were alluding to was a very, very effective multidisciplinary group that more or less resulted in consensus as to how they should go about looking at this particular syndrome. However, with the amount of research that is emanating from many places in the world, in reality, the NIH and the United States has been one of the driving forces.

This was more of a "How do we get together to be sure we're doing the right things?" They do have a research agenda, but the United States of course has a large amount of research.

JOHNSON: This is Tim Johnson. At our meeting we had researchers from Argentina, from Mexico, from Holland, from France, from the U.K., from the U.S., and from Australia. So this is a very prevalent condition; a lot of women have it across the world. There's a lot of interest in this condition in terms of researchers and in terms of advocacy groups and patients all over the world. I think what the Australians have done is put together a really good systematic review of the literature and some really good recommendations in terms of programs and policies and really good educational materials.

There are probably other examples, but you know they spent over a million dollars and over a year doing the work. We met for a couple of days and we really thought we should give a nod to the immense amount of work that they've done to set the platform and to set the stage for next steps.

SWINDERMAN: Thank you.

ENGEL: At this point we have no other question and we are just about out of time. I would like to thank our very hard working panel Dr. Rizza and Dr. Johnson as well as the reporters that are on the line and those that will be listening to the replay. We hope you'll join us for future telebriefings and thank you very much. Have a great afternoon.

RIZZA: Take care; bye-bye.

JOHNSON: Thank you everybody.

OPERATOR: Ladies and gentlemen this does conclude today's teleconference. A replay of this conference will be available later this afternoon. To access the replay, please dial 888-632-8973. When prompted enter replay code 51310423. Please visit us on the web at prevention.nih.gov or e-mail us at prevention@mail.nih.gov. We thank you for your participation. You may disconnect your lines at this time and have a great day.

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